DOCUMENT RESUME

ED 364 524 SP 034 861

AUTHOR Kellogg, Nancy Rader
TITLE AIDS Elementary/Intermediate Curriculum.
INSTITUTION Northglenn-Thornton School District 12, Northglenn, CO.
REPORT NO ISBN-0-944584-11-X
PUB DATE 90
NOTE 72p.
AVAILABLE FROM Sopris West, Inc., 1140 Boston Avenue, Longmont, CO 80501 ($8.95).
PUB TYPE Guides - Classroom Use - Teaching Guides (For Teacher) (052)

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS *Acquired Immune Deficiency Syndrome; *Activity Units; Curriculum Guides; Decision Making Skills; Disease Control; Disease Incidence; *Educational Objectives; Elementary School Students; *Health Education; *Health Promotion; *Integrated Curriculum; Intermediate Grades; Junior High Schools; Junior High School Students; Learning Activities; Student Attitudes

ABSTRACT

This Acquired Immune Deficiency Syndrome (AIDS) Curriculum was developed for intermediate elementary (5th, 6th, and 7th grade) students. It is an integrated unit that encompasses health, science, social studies, math, and language arts. The curriculum is comprised of nine class activities designed to meet the following objectives: (1) to determine what students know about AIDS in such a way that students will provide honest information; (2) to provide information about diseases and disease-causing organisms; (3) to learn how the human immune system operates; (4) to gain accurate information about AIDS; (5) to gain compassion for people with AIDS; (6) to gain information about AIDS transmission; (7) to gain accurate information about the distribution of AIDS in the United States, to learn how to process data from the information given, and to learn about AIDS in the student's state; (8) to apply information learned about AIDS to a situation and to show compassion for people with AIDS by writing about a situation; and (9) to learn how to make good decisions by exploring alternatives and consequences and to apply decision-making to a situation where AIDS could be transmitted. The manual contains reproducible student handouts, transparency masters, a sample parent letter, and a cognitive test which assesses student knowledge of key facts about AIDS. (LL)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 364 524

AIDS

Elementary/Intermediate Curriculum

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL IN OTHER THAN PAPER COPY HAS BEEN GRANTED BY

J. Leuthesser

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

SP 023 861

BEST COPY AVAILABLE

Nancy Rader Kellogg, Ph.D.

AIDS

Elementary/Intermediate

Curriculum

Author

Nancy Rader Kellogg, Ph.D.

(Health/Secondary Science Specialist)

School District No. 12, Adams County, CO
Adams Twelve-Five Star Schools
11285 Highline Drive
Northglenn, Colorado 80233

This manual contains student handouts
and transparency masters. Permission is granted for
teachers to reproduce these pages for use in their classrooms.
All remaining parts of this manual are the property of
Adams Co. School District #12
and may not be reproduced in whole or in part, by
mimeograph or any other means, without
expressed written permission

© Copyright 1990
ISBN # 0-944584-11-X

Acknowledgements

Many talented educators, health care specialists, and parents made contributions to the development of this AIDS curriculum. The following people are acknowledged for their work and expertise on this cooperative endeavor.

Teachers and Administrators, District 12

Natalie Wolman, Specialist
Barbara McGhghy, Nurse
Sue Wilson, Teacher
Linda Spitzer, Teacher
Melissa Swenson, Teacher
Pat Middleton, Teacher
Katy Kupecz, Teacher
Joan Severns, Teacher
Joanne Smith, Teacher
Marjorie McCandless, Teacher
D.L. Viers, Principal
Judy Huddleston, Executive Director, C & I
Pat Willsey, Specialist
Don Bruno, Assistant Superintendent, C & I
James Mitchell, Superintendent

Community Health Care Specialists

Patty Cook, Hall of Life
Gail Curry-Kane, University of Colorado Health Sciences Center
Rita Beam, Humana Hospital
Grace Linn, Tri-County Health

Parents

Kay Donaldson
Connie Hein
Marilyn Tani

Board of Education

Christine Sundberg
Sharon Proehl
Mary Johns
Ronald Hodges
Larry Karsten

Special thanks goes to Dawn Barnard, who provided secretarial support to the project, and Natalie Wolman, who was the co-chairperson for the AIDS Curriculum Committee.

Table of Contents

Overview and Outcomes 1

Preparation for the Unit 1
- Staff Inservice 1
- Instructional Notes 1
- Parent Communications 2
- Materials 2
- Background Information 3
- Teacher Resources 6

Glossary of Terms 7

Sample Parent Letter 9

Activity 1 10

Activity 2 11
- Disease Information Sheets 14

Activity 3 26
- Overhead #1 29
- Overhead #2 31

Activity 4 33
- Worksheet #1 35
- Worksheet #1 Answer Key 37

Activity 5 38

Activity #6 40
Worksheet #2 41
Worksheet #2 Answer Key 42

Activity #7 43
People With AIDS in Your State 46
AIDS in the United States 47
Overhead #3 48
Worksheet #3 49
Worksheet #3 Answer Key 51

Activity #8 54

Activity #9 55
Worksheet #4 59

Closure 61

AIDS Post-test 62
AIDS Post-test Answer Key 63

Overview and Outcomes

This AIDS Curriculum was developed for intermediate elementary (5th, 6th, and 7th grades) students. It is an integrated unit that encompasses health, science, social studies, math, and language arts. The curriculum is comprised of nine major activities designed to span six to seven days in 45-60 minute blocks. It is important that elementary students learn the facts about a disease that has become an epidemic. Awareness about AIDS will help combat fear of this disease. The curriculum focuses on the student outcomes which are:

- To learn accurate information about the transmission of AIDS.
- To gain compassion for people with AIDS through knowledge and discussion about the disease.
- To participate in activities that focus on decision making.

Preparation for the Unit

Staff In-service

Before the AIDS curriculum is taught to students, it is recommended that teachers involved in instruction have a half-day or full-day inservice. This inservice should include accurate up-to-date information on AIDS (best provided by local health professionals), and an overview of the curriculum. One or two lessons should be modeled. It is recommended that a building administrator, school nurse and parent be included in the inservice in addition to the teachers. This group can serve as a resource cadre for the building and can instruct the staff about AIDS.

Instructional Notes

Prior to instruction about AIDS, students should have a background on human growth and development and on disease transmission.

Students should be provided with current information on AIDS in the U.S. Current statistics can be obtained from the Centers for Disease Control and State Health Department.

Homosexual behavior is not addressed in the unit due to the age of the students. If questions are asked about homosexual behavior and AIDS,

the questions should be answered. On other continents, such as Africa, AIDS did not begin in the homosexual population.

Parent Communications

Invite parents to review the AIDS unit before instruction.

Send a letter home to parents requesting permission for instruction (see sample letter). Students should have signed permission letters to participate in instruction.

Provide alternate activities for students without parental permission.

Materials

1 kit per school which contains the following is recommended

- Overhead transparencies
- Beans or colored chips (1,000 for class unless done as a teacher demonstration (25-50)
- Disease information sheets
- Student worksheet blackline masters
- 5-10 laminated cards or photographs of people with AIDS per student (from *Newsweek,* August 10,1987, or other sources)

Captions on each card should have the following format:

Name:

Age:

Occupation:

Ethnic Group:

Residence:

Method of Infection: Sexual contact (state sexual contact only, not whether it was through homosexual contact), IV drug use, blood transfusion, other.

- 1 large white hollow styrofoam ball that comes apart (can purchase at a craft store)

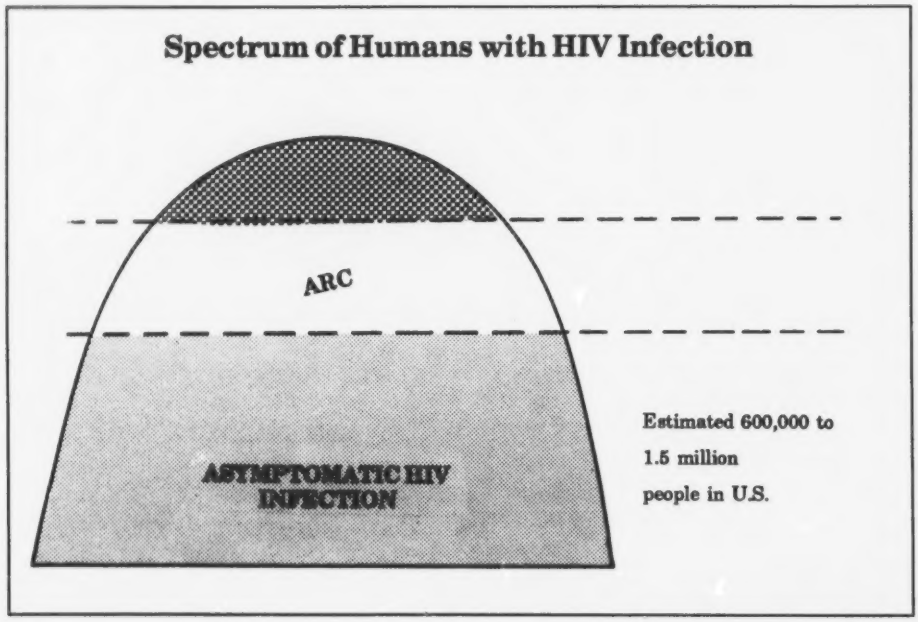
- 6 or more small colored styrofoam balls (same color)
- 4 or more colored toothpicks (same color as styrofoam balls)
- Overhead projector
- Overhead pens
- 3 x 5 cards or slips of paper
- Container, such as a shoebox, to hold cards for 1st activity (serves as Question Box later).
- Student worksheets (framed) in this manual may be reproduced for use with students.
- Videotape from "*I Have AIDS: A Teenager's Story*" (This is Ryan White's story.)

Background Information

Teachers should be familiar with the following key facts about AIDS and should keep themselves current on rapidly changing information about AIDS.

- AIDS is an abbreviation for Acquired Immunodeficiency Syndrome which is a serious disease.
- AIDS is caused by a virus (Human Immunodeficiency Virus or HIV).
- Viruses are organisms that are so small that they cannot be seen with the naked eye.
- There are many viruses that cause different diseases.
- Viruses are transmitted in different ways.
- The AIDS virus can be transmitted through the body fluids of blood, semen, and vaginal fluid. There is no documented evidence that the virus is transmitted through saliva, tears, urine or feces.
- The AIDS virus weakens an infected person's ability to fight off disease. The virus affects the immune system.
- People with the AIDS virus (HIV) may not have any signs or symptoms of disease. It may be ten or more years before they develop symptoms or signs of AIDS.

- People infected with the HIV virus that show no symptoms of disease can infect other people with the virus through exchange of body fluids (blood, semen, vaginal fluids).
- It is estimated that 600,000 to 1.5 million people in the U.S. are infected by the virus but currently do not show symptoms of disease.
- The AIDS virus (HIV) can affect any person anywhere in the world. It does not matter where they live, what ethnic group they belong to, what sex, what economic background, or age.
- Infection by the virus can take 3 forms
  - *Asymptomatic HIV Infection. These people aren't sick. (They may get sick.) They carry the virus and can transmit it to someone else. The majority of people with the virus are asymptomatic.*
  - *ARC (AIDS Related Complex). A person's immune system is not functioning well so the person shows signs of illness. This category is in the process of being phased out.*
  - *AIDS (Aquired Immune Deficiency Syndrome). This is the most serious form of the disease and is life threatening since the person's immune system is seriously compromised.*



- People with AIDS can develop opportunistic infections such as ***pneumocystis pneumonia*** and several other diseases that healthy people do not get. These include a skin cancer called ***Kaposi's sarcoma***. Opportunistic infections can result in death of the person with AIDS.
- People with AIDS generally live for several years after AIDS is diagnosed. However, death can occur in a few days. Drugs such as AZT are increasing the lifespan of people with AIDS.
- A person's behavior is what puts him or her at risk for AIDS.
- The AIDS virus (HIV) can be transmitted as follows from an infected person to another person:
  - *through sexual intercourse;*
  - *by blood exchange through sharing needles during IV drug use, tattoos, blood brother rituals, ear piercing;*
  - *through contaminated blood products or blood transfusions (After 1985 all blood is screened so the risk of virus transmission through this avenue is very low.); and*
  - *to a baby prior to, or during birth.*
- People with AIDS are referred to as "People Living With AIDS (PLWA)".
- **The AIDS virus is hard to get.** It is not transmitted through casual contact. You **cannot** get AIDS from any of the following:
  - *Sharing food or beverages*
  - *Toilet seats or sinks*
  - *Touching or hugging someone with AIDS*
  - *Drinking fountains*
  - *Riding buses*
  - *Swimming pools or hot tubs*
  - *Sharing telephones*
  - *Sharing school books, supplies, lockers, etc.*
  - *Insect bites such as mosquitos*
  - *Coughing or sneezing*
  - *Donating blood*
  - *Living or working with a person with AIDS*

- There is no cure for AIDS.
- There is no vaccine against AIDS.

Teacher Resources

ARTICLES

"AIDS," *Newsweek,* pp. 20-29, August 12, 1985.

"Our Immune System, The Wars Within", *National Geographic*, Vol. 169, No. 6, June 1986.

The AIDS Challenge, Prevention Education For Young People. Edited by Marcia Quackenbush and Mary Nelson with Kay Clark 1988. Network Publications P.O. Box 1830, Santa Cruz, CA 95061-1830.

"The AIDS Epidemic, The Search for a Cure," *Newsweek,* pp. 74-79, April 18, 1983, The Newsweek Building, P.O. Box 403, Livingston, NJ 07039-9967.

The Faces of AIDS," *Newsweek*, pp. 22-39, August 10, 1987.

"What Science Knows About AIDS", *Scientific American*, pp. 41-134, October 1988, 415 Madison Avenue, New York, NY 10017 (212) 754-0550.

VIDEOTAPE

I have AIDS: A Teenager's Story. 28-Minutes, Production by The Children's Television Workshop, Distributed by Media Tech East, 216 West 18th St., New York, NY 10011 (212) 463-8300

DEPARTMENT/AGENCY RESOURCES

AIDS Project-(State)

American Red Cross - Washington D.C. (202) 737-8300

Centers for Disease Control - Atlanta, GA (404) 320-8333

County Health Department

Hospital - Local

National AIDS Hotline 1-800-342-AIDS

State Department of Education - AIDS Project

State Department of Health - (State)

University Health Sciences Center

Glossary Of Terms

AIDS	An infectious disease caused by the Human Immunodeficiency Virus (HIV). AIDS is an abbreviation for Acquired Immune Deficiency Syndrome. • *Acquired* means to get the disease from another person. • *Immune Deficiency* means a person's immune system is deficient or less effective. • A *Syndrome* is the name for a pattern of problems that together comprise a diagnosis for a particular disease.
Antibody	A blood protein that helps fight infections.
B-Cell	A type of white blood cell that makes antibodies to fight infection.
Bacteria	Microscopic living organisms. Some can cause infectious diseases such as strep throat.
Bisexual	A person who is sexually attracted to members of both sexes.
Blood Transfusion	A medical procedure by which blood or blood products from one person are transferred into the blood of another person.
Disease	Illness or a group of problems sometimes caused by an organism when it attacks a person's body. These problems can be headache, fever, coughing, etc. Some diseases, such as heart disease, are not caused by organisms.
Fungi	Living organisms that can cause diseases such as thrush or athlete's foot.

Hemophiliac	A person with an inherited disease where the blood does not clot properly.
Heterosexual	A person who is sexually attracted only to members of the opposite sex.
HIV	An abbreviation for the human immunodeficiency virus which causes AIDS.
Homosexual (gay)	A person who is sexually attracted only to members of the same sex.
Immune	A highly specific defense mechanism that kills microorganisms (e.g. bacteria, viruses) and the cells they infect in order to protect the human body from disease.
Infection	The establishment in the human body of living organisms that results in illness.
Intravenous (IV)	In or into a vein.
Kaposi's Sarcoma (KS)	A rare form of skin cancer commonly found in people with AIDS. This is an opportunistic disease.
Opportunistic Infection	Infection that occurs in the body when the immune system becomes depressed and would normally be fought by a healthy immune system.

Sample Parent Letter

Dear Parent or Guardian:

Instruction on AIDS will occur for (fifth, sixth, seventh) grade students in your child's school starting on _____ for 6-7 class periods of about 45 minutes each. During instruction students will learn about the transmission and prevention of AIDS, gain compassion for people with AIDS and improve their decision-making skills.

The _____ Board of Education has approved the curriculum. It is available for your review prior to instruction. If you would like to review the curriculum, or have any questions, please contact the building principal or the district health education specialist, at the administration building.

Please complete the attached permission form for your child to participate in instruction about AIDS and return it by _____.

Sincerely,

Principal
Elementary School

- - - - - - - - - - - - - - - - - SIGN, DETACH, AND RETURN - - - - - - - - - - - - - - - - -

_____ Yes My child may participate in AIDS instruction.

_____ No My child may not participate in AIDS instruction.

_____

(Student's Name) (Date)

_____

(Address) (Telephone)

_____

(Parent/Guardian Signature)

ACTIVITY 1

(Day 1)

Objective

To determine what students know about AIDS in such a way that students will provide honest information.

Materials

overhead and overhead pens or newsprint or chalkboard

3 x 5 notecards or slips of paper

container to hold cards

Teaching Sequence

Tell students they will be studying about a disease called AIDS.

Determine what students think they know about AIDS and what they want to know.

Pass out a 3 x 5 notecard or slip of paper to each student and ask them to write down what they think they know about AIDS (one or more statements). On the same card have them write down one thing they want to know about AIDS. Collect cards in a container.

Under the following headings, write down the student comments on the board, newsprint or overhead.

- What I Think I Know About AIDS
- What I Want to Know About AIDS

Tell the students they will find out if their ideas are accurate through discussion, research and activities.

Note: Do Activity #2 on the same day.

ACTIVITY 2

(Day 1)

Objective

To provide information about diseases and disease-causing organisms

Materials

Question Box

disease information sheets

poster board, newsprint, markers for skit or role play

Teaching Sequence

Begin a discussion about disease.

Q *What is disease?*

Discussion can include: Illness or absence of good health; destructive process in a part of the body or to a total person. This can be caused by an organism that attacks the human body.

Q *What are some things that cause disease? We will study this through research and a role play or skit.*

Divide the class into groups of 5 each. Each group will research and become experts in one of each of the following:

- viruses (could have two groups work on different viruses),
- bacteria,
- parasites (protozoa),
- fungi, and
- diseases not caused by organisms (heart disease, diabetes).

NOTE: Infectious diseases are caused by viruses, bacteria, parasites, and fungi.

Students in each group should present their information to the entire class through a skit or role play. They should cover key points such as examples of diseases caused by organisms and a description of some

examples of diseases in each category. Give each group information sheets about the disease area they are studying before the role-playing skits. Lead a group discussion, making certain students understand infectious diseases. It is critical that they understand that **diseases are transmitted in different ways**. Compile the information presented by each group on newsprint and keep this visible throughout the unit. An example of such a chart is provided below.

Disease Information Chart

Name	Cause	Transmission	Symptoms	Frequency/Severity of Infection	Prevention
Common Cold	Virus	Coughing or sneezing of infected airborne droplets	Runny nose; congested chest, lungs, nasal area; sore throat; red watery eyes; tiredness; fever	Common all ages and worldwide. Can occur one or many times each year	Good hygiene practices; isolation; no vaccine

An example of questions that can be asked is:

Q *What kinds of organisms cause disease or infection?*

Viruses, bacteria, parasites, fungi

Q *What is an infection?*

Establishment in the human body of living organisms that results in illness

Q *How can infections be transmitted from one person to another?*

Transmitted in different ways - e.g. cold or flu virus through coughing, sneezing; *Giardia lamblia* through human waste; AIDS through exchange of body fluids such as blood to blood contact

Q *How can the transmission of disease be prevented?*

Give examples: (To stop the cold virus, use good hygiene practices such as handwashing or not sharing food, drinks and materials; to stop the AIDS virus, do not be involved in behaviors that share body fluids .)

Q *What are examples of diseases that are not infectious?*

Heart disease, stroke, emphysema, some cancers, diabetes, high blood pressure

This is a recommended place to conclude the day's lesson. If students have any unanswered questions about diseases, have them write down the questions and place them in the Question Box.

Extension

Each group could make a poster on their disease category in addition to their skit or role-play situation.

Influenza (Flu)

Cause of Disease:

Virus (varies each year). Flu is caused by a virus that affects the lungs, throat, and nose (respiratory system). Therefore, many different viruses cause the flu. Different vaccines are given for different flu viruses or combinations of viruses. Each vaccine is specific for a specific kind of flu virus.

Description of Organism:

Very small virus - cannot see virus under a school microscope.

Disease Transmission:

It is highly contagious through contact with an infected person and is spread by coughing or sneezing of infected airborne droplets. It can be passed to another person through a recently soiled article, such as a pencil.

Disease Symptoms:

- Abrupt fever
- Headache
- Sometimes diarrhea
- Tiredness - don't feel like moving
- Chills
- Muscle aches
- Sometimes vomiting
- Cough - universal symptom, severe and prolonged

Frequency and Severity of Infection:

It is a common disease found from infants to adults. It often lasts 2-7 days. If people have been sick with the flu, they can catch other viruses. The flu has no cure, but vaccination will reduce getting infected. It is treated with bed rest, lots of liquids to drink, and drugs like Tylenol. (Aspirin is not recommended for children and teenagers.) The flu is uncomfortable but not serious.

Disease Prevention:

- *Uninfected people should stay away from people with the flu.*
- *Use good hygiene practices such as hand washing.*
- *Do not share food or drinks.*
- *Receive a vaccination against the flu virus. However, vaccinations are specific to only one flu virus.*

Cold

Cause of Disease:

Virus - such as rhinovirus. The common cold is caused by a virus which infects the nose and throat. There are many different viruses that cause colds. Therefore, a vaccine cannot be developed to prevent a cold. Vaccines are specific for one organism.

Description of Organism:

Very small virus - cannot see virus under a school microscope.

Disease Transmission:

It is highly contagious and is spread by coughing or sneezing of infected airborne droplets. Colds are most contagious in the first 3-4 days.

Disease Symptoms:

Runny nose
Sore throat
Sneezing
Dry cough
Breathing difficulty
Tiredness
Congested chest and lungs, nasal area
Loss of appetite
Red, watery eyes
Neck, head, muscle aches
Hoarse voice
Ear infection can occur
Fever

Frequency and Severity of Infection:

It is a common disease found from infants to adults and found all over the world. Colds can occur in the same person one or more times a year and each cold can last for several days. People need plenty of rest with a cold and generally get well quickly. There is no vaccine or cure.

Disease Prevention:

- *Uninfected people should stay away from people with colds until symptoms of drainage and coughing lessen.*
- *Use good hygiene practices such as hand washing.*
- *Do not share food or drinks.*

Chicken Pox

Cause of Disease:

Virus (Varicella zoster) - Chicken pox is caused by a virus that results in a rash. The rash often appears over large parts of the body and causes itching.

Description of Organism:

Very small virus. Cannot see virus under a school microscope.

Disease Transmission:

It is highly contagious from 5 days before rash appears until blisters dry (about another 6 days). It is believed to be spread by coughing or sneezing of infected airborne droplets. After exposure, it takes about 2 to 3 weeks to develop Chicken Pox.

Disease Symptoms:

Itchy rash that progresses from red spots to blisters which dry and form scabs

Mild fever, followed by a rash within a few hours

Tiredness/headache

Frequency and Severity of Infection:

It is a very common childhood disease found throughout the world. It is treated with rest, liquids and an aspirin substitute. Aspirin is not recommended for children and teenagers. Once a person has had Chicken Pox, the person is generally immune to the disease in the future. This is a disease from which children quickly recover. In adults the disease may cause significant problems.

Disease Prevention

- *Children should not attend school for one week after the first spots appear. Avoid contact with people who have not had chicken pox.*
- *Persons receiving steroids need protection against catching chicken pox.*

Rubella (German measles or 3-day measles)

Cause of Disease:

Virus (Rubella) German measles is a common contagious disease caused by a virus. The person has a rash of small red slightly raised bumps.

Description of Organism:

Very small virus - cannot see virus under a school microscope.

Disease Transmission:

It is quite contagious 7 days before the rash appears to 5 days after the rash appears. Transmission can occur by breathing in infected droplets.
After exposure to a person with German measles, it takes 14-21 days to develop the disease.

Disease Symptoms:

Low fever
Mild runny nose followed by a rash in one or two days
Joint pain and swelling
Swollen glands in back of neck, behind ears
Red rash of small slightly raised spots

Frequency and Severity of Infection:

It does not occur often in the U.S. because most children are vaccinated after 15 months of age. It is found worldwide. It is treated with rest, liquids, and an aspirin substitute. Aspirin is not recommended for children and teenagers. Rubella is relatively harmless to all people except unborn babies. If a pregnant women who has not had this disease or not been vaccinated is exposed to the virus, it can affect her unborn baby. The affected unborn baby can have birth defects such as blindness, deafness or heart disease.

Disease Prevention:

- *Receive a vaccination (immunization) against the German measles virus.*

Strep Throat

Cause of Disease:

Streptococcus pyogenes (group A). Infected people often have sore throats and a fever with the disease.

Description of Organism:

A round shaped bacterium causes disease. Can see under a school microscope magnified 1000 times - arranged in chains.

Disease Transmission:

The disease is generally transmitted through coughing and sneezing (airborne), through intimate contact with an infected person, or eating contaminated foods (milk products).

Disease Symptoms:

Highly contagious throat infection that is infectious about 10 days.
May include:

Sore throat	Fever up to 104 F.
Sometimes red rash	Abdominal pain
Vomiting	Swollen lymph nodes (sore neck)

However, a person may not show any symptoms and not know he/she is sick (chronic carrier).

Frequency and Severity of Infection:

This is a common disease frequently occurring in children between ages 3-12. It is treated with antibiotics. If untreated, strep throat can have serious effects and result in rheumatic heart disease. Death rarely occurs.

Disease Prevention:

- *Use good hygiene practices - cover mouth, wash hands.*
- *Do not share food or drinks.*
- *Receive education on transmission.*

Tuberculosis (TB)

Cause of Disease:

Bacterium (Mycobacterium tuberculosis)
This bacterium causes tuberculosis which commonly affects the lungs or respiratory system. Infected people often have severe coughing very late in the disease.

Description of Organism:

Rod shape bacterium. Can see under a microscope magnified 1000 times. The bacteria is slow growing.

Disease Transmission:

The bacteria are carried through the air from coughing and sneezing. It can also be spread through contaminated milk which is called bovine (cow) tuberculosis. In overcrowded places, it can spread quickly.

Disease Symptoms:

Fever
Lack of energy
Dry cough
Severe sweating in bed at night
Pulmonary disease (lungs) most common
Loss of appetite and weight
Irritable

Frequency and Severity of Infection:

There are some reported cases in the United States now. It is easily treated with modern drugs and rest. The number of cases of tuberculosis is increasing in people with AIDS. Few people in the U.S. die from TB now. People are frequently screened for TB using X-rays or a skin test. However, in the past it was a common disease that was very serious and frequently resulted in death. Many people with tuberculosis came to Colorado in the early 1900's for a cure because of the drier climate as compared with the Eastern U.S.

Incubation:

The infection progresses to noticeable spots in the lungs in about 4-6 weeks. People with an early stage of the disease do not show signs of illness. It is a progressive disease that may go on for years. The first 6 months to one year after infection is the most hazardous, contagious period.

Disease Prevention:

- *Uninfected people should stay away from people with tuberculosis. People with tuberculosis are generally isolated from uninfected people in special hospitals.*

Head Lice (Pediculosis)

Cause of Disease:

Head Louse (Singular) - (Pediculus humanus capitis). The head louse is a tiny parasite that lives on or near the scalp. It causes scalp itching and irritation.

Description of Organism:

Lice are tiny parasitic arthropods. When they bite people, their saliva causes an irritation and itching. Lice are almost impossible to see. However, the eggs called nits are more easily seen. The nits appear as white flecks on hair and are firmly attached to the hair. Dandruff is also white, but is not firmly attached to hair.

Disease Transmission:

Lice live only on humans, not on pets. They are easily transmitted from one person to another. School children sometimes get lice.

Disease Symptoms:

Itching of the scalp
Scaly rash on back of neck near hairline
Enlarged lymph glands at base of skull

Frequency and severity of infection:

Lice is found worldwide. It sometimes occurs among school children. Lice can be transmitted easily from one child to another. To get rid of head lice, several shampoos, made especially to treat the parasite, are sold. The best treatment is available by prescription from a physician. The scalp must be treated at least twice with the shampoo. After each shampoo, comb with a fine-toothed comb.

Disease Prevention:

- *Use good hygiene practices (do not share combs, etc.).*
- *Other family members should be treated to prevent more head lice.*
- *Treat all combs and brushes of the person with head lice with the special shampoo or hot water.*
- *Clean all hats, pillowcases, and clothing in very hot water in the household of an infected person (very important to do).*

Giardiasis (gee-ar-dye-a-sis)

Cause of Disease:

Giardia lamblia. Giardia affects the intestine, often resulting in severe diarrhea and abdominal cramps when it first begins.

Description of Organism:

Giardia is a protozoan (sometimes called a little old man because of the way it looks). It may be found in mountain streams and lakes.

Disease Transmission:

Giardia is found in infected human or other animal waste (feces). This waste often ends up in mountain streams and lakes.

Disease Symptoms:

Intestinal disorder (attach to small intestine)
Diarrhea - pale, greasy with an especially bad odor (due to little or no absorption of fat)
Increased gas
Loss of appetite
Abdominal cramps
Bloating
Weight loss
Tiredness
Only occurs with lots of these organisms in the body

Frequency and Severity of Infection:

Giardiasis is becoming more frequent in the U.S. due to contaminated water. It is found throughout the world. It affects more children than adults. The disease can be treated with special drugs. People rarely die from the disease.

Disease Prevention:

- *Do not drink untreated water. Treat all lake or stream water as untreated and boil for 3-5 minutes. Giardia is not killed in water that contains chlorine.*
- *When camping, bury all human feces about 8" deep and at least 100 feet away from natural water.*
- *Wash your hands well before eating or handling food.*

Athlete's Foot (Ringworm of the Feet) (Tinea pedis)

Cause of Disease:

Usually Fungus Trichophyton (various species). It is caused by a fungus that infects the skin on the feet, especially between the third and fourth toes.

Description of Organism:

Very small fungus

Disease Transmission:

The fungus is contagious through direct or indirect contact with an infectious person. It is picked up at swimming pools, gyms and showers. It is a common disease among adolescents (more common in males).

Disease Symptoms:

Itching often begins between the third and fourth toes
Itching between toes or on feet
Redness, scaling of skin between toes
Blisters and unpleasant odor
May appear on the hands

Frequency and Severity of Infection:

It is a common disease. If athlete's foot is not treated properly it can spread to toenails, bottom of feet, ankles, and hands. Antifungal foot powder or ointment is used to control the fungus. Cotton socks need to be changed frequently if a person sweats a great deal. A person should wear well-ventilated shoes or sandals.

Disease Prevention:

- *Feet need to be dried thoroughly after washing.*
- *Socks should be clean and shoes need to be dry.*
- *Wear rubber shoes in public showers and around swimming pools.*
- *Receive education about Ringworm.*

Dermatophytosis

Specific types may include:

Ringworm of the Body (Tinea corporis)
Ringworm of the Foot (Tinea pedis)
Ringworm of the Scalp (Tinea capitis)
Ringworm of the Hand (Tinea manus)

Cause of Disease:

Fungus (various organisms). The ringworm fungus affects the skin causing an infection that shows up as a flat red spot that spreads in the shape of a circle. It often occurs on the face, arms, shoulders, and groin of children.

Description of organism:

Very small fungus

Disease Transmission:

The fungus is contagious. It is picked up from direct or indirect contact with infected people or household pets.

Disease Symptoms:

Flat red spot that spreads outward in the shape of a circle or horseshoe - with a scaly edge and clearer center
Common areas infected: face, arms, shoulder, and groin
Scalp ringworm causes patchy hair loss, redness, or mousey-lackluster hair with a mouse-like odor.

Frequency and Severity of Infection:

It is a common skin problem that is painless. It is easily controlled with a special cream to stop fungi.

Disease Prevention:

- *Use good hygiene practices such as hand washing.*

Diabetes Mellitus

Cause of Disease:

Diabetes is not caused by an organism. Therefore, it is not contagious. Diabetes is caused by the lack of a chemical called insulin in the body. Insulin is a hormone made in the pancreas that allows sugar in the blood to cross into the cells of the body. When there is not enough insulin, sugar cannot pass from the blood. Therefore, there is an accumulation of sugar in the blood. This increase in sugar can be detected in a person's urine.

Disease Symptoms:

Want to drink lots of water, juice, etc.
Increased appetite
Need to urinate frequently
Weight loss
Tiredness
Rapid, deep breathing
Strange odor to the breath

Disease Treatment:

Diabetes may be hereditary (passed on from parents to children). People with diabetes are put on special diets. They may take insulin injections or oral insulin supplements. Supervision by a doctor is necessary.

High Blood Pressure (Hypertension)

Cause of Disease:

High blood pressure is not caused by an organism. Blood pressure is elevated above the normal range for many different reasons.

Disease Symptoms: (Severe cases)

Numb arms or face
Blurred or lost vision
Irritability
Blackout spells or dizziness
Headache
Difficulty sleeping

Disease Treatment:

A doctor needs to prescribe treatment.

ACTIVITY 3

(Day 2)

Objective

To learn how the human immune system operates

Materials

Question Box

newsprint with compiled information on diseases

overhead #1 and #2

Teaching Sequence

Begin the lesson by leading a discussion on any questions in the Question Box.

Lead the students into how the human immune system works.

Q *How does our body fight disease?*

Human blood contains several kinds of white blood cells (about 1 trillion in all). There are three groups of white blood cells that help protect us against disease. One group serves as "cell eaters" (macrophages) and actually eats foreign substances that enter the body. The other two groups, T cells and B cells, also identify and destroy all substances that are not part of the human body. It is similar to a chain of events. A type of T cell called a helper T cell stimulates the production of B cells. B cells then produce chemicals called antibodies which stop the foreign substance from attacking other cells of the body. Use Overheads #1 and #2 to illustrate the above process.

Summarize by comparing a healthy person with a person who has AIDS. The following teacher demonstration will assist students with understanding how the AIDS virus attaches to the helper T cell.

Teacher Note: The description of the immune system given in this activity is not a comprehensive view of how the system works, but is detailed enough for students to understand some of the basic components involved.

Teacher Demonstration

Purpose To show how the AIDS virus attaches to a helper T (sometimes called T4) white blood cell

Background The helper T white blood cell has specific receptor sites or protein bumps where the AIDS virus can attach and become part of the helper T cell.

Materials for Demonstration

- 1 large white styrofoam ball that comes apart (hollow inside)
- 6 or more small colored styrofoam balls (same color)
- 4 or more colored toothpicks (same color as styrofoam balls)

Demonstration procedure

Before the demonstration, put 2 or more small colored balls inside the large ball.

Tell students that the large styrofoam ball represents a white blood cell called a helper T cell. This helper T cell has special sites called receptors that are represented by the four colored toothpicks.

The AIDS virus represented by a smaller colored ball gets into the blood where the helper T cell is located. The AIDS virus hooks onto special sites or places called receptor sites which are represented by colored toothpicks (same color as AIDS virus).

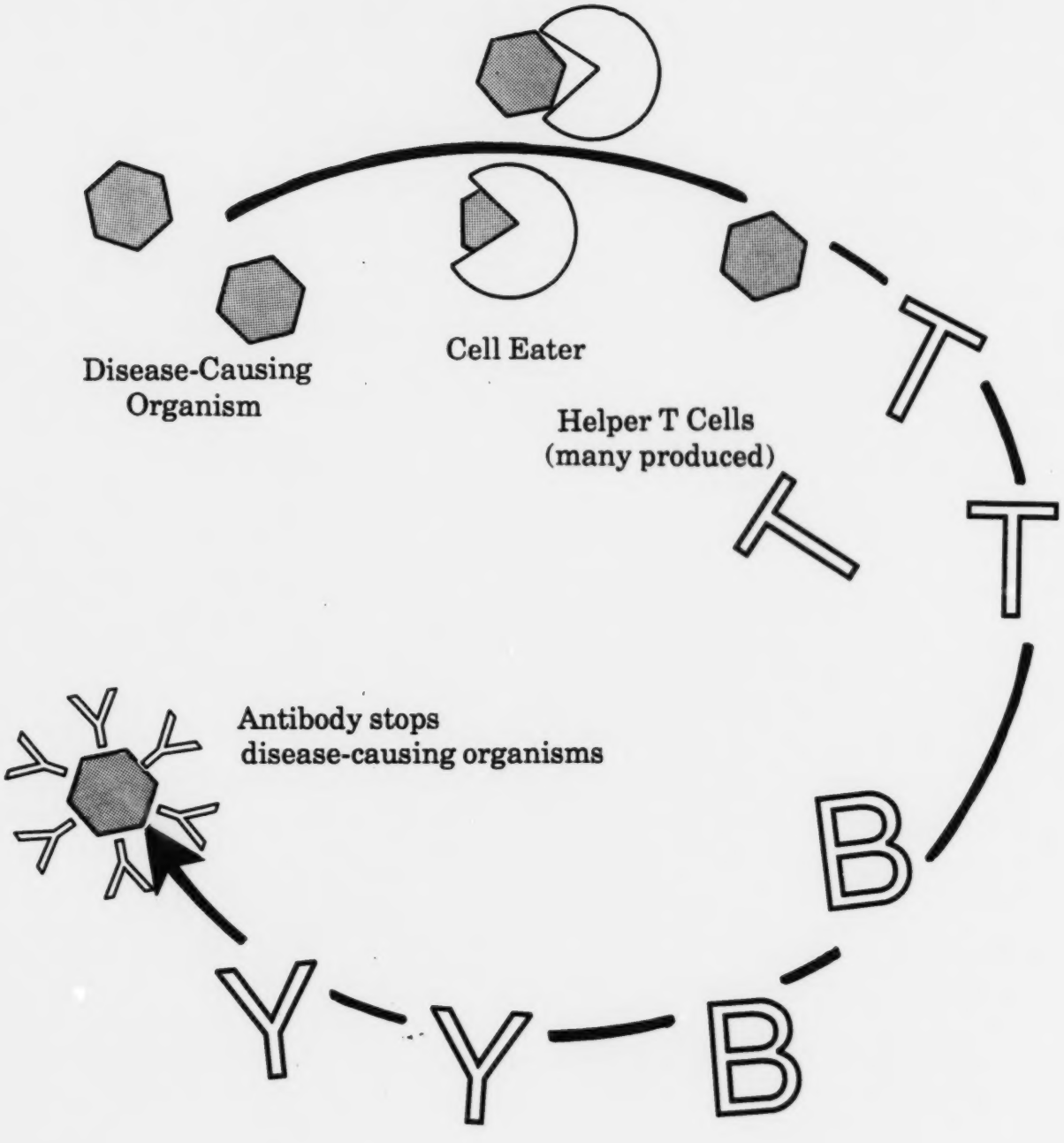
Attach 4 colored balls to the toothpicks. This is similar to a lock and key. The AIDS virus is like a key that only fits certain locks. Other viruses cannot attach here. These AIDS viruses then become part of the helper T cell. The AIDS virus can hide from the immune system within the infected helper T cell. The helper T cells become virus producing factories making thousands of copies of viruses within a single infected cell. At some point they may make more viruses and release them into the bloodstream where they infect more helper T cells. (Open the ball and let out the colored balls.) As more helper T cells become infected this destroys a person's immune system.

In addition to infecting helper T cells, the AIDS virus may also infect macrophages (cell eaters) and certain brain cells.

Have students write down any unanswered questions and place them in the Question Box.

NOTE: You may want to do the first part of Activity 4 using photograph cards on this same day.

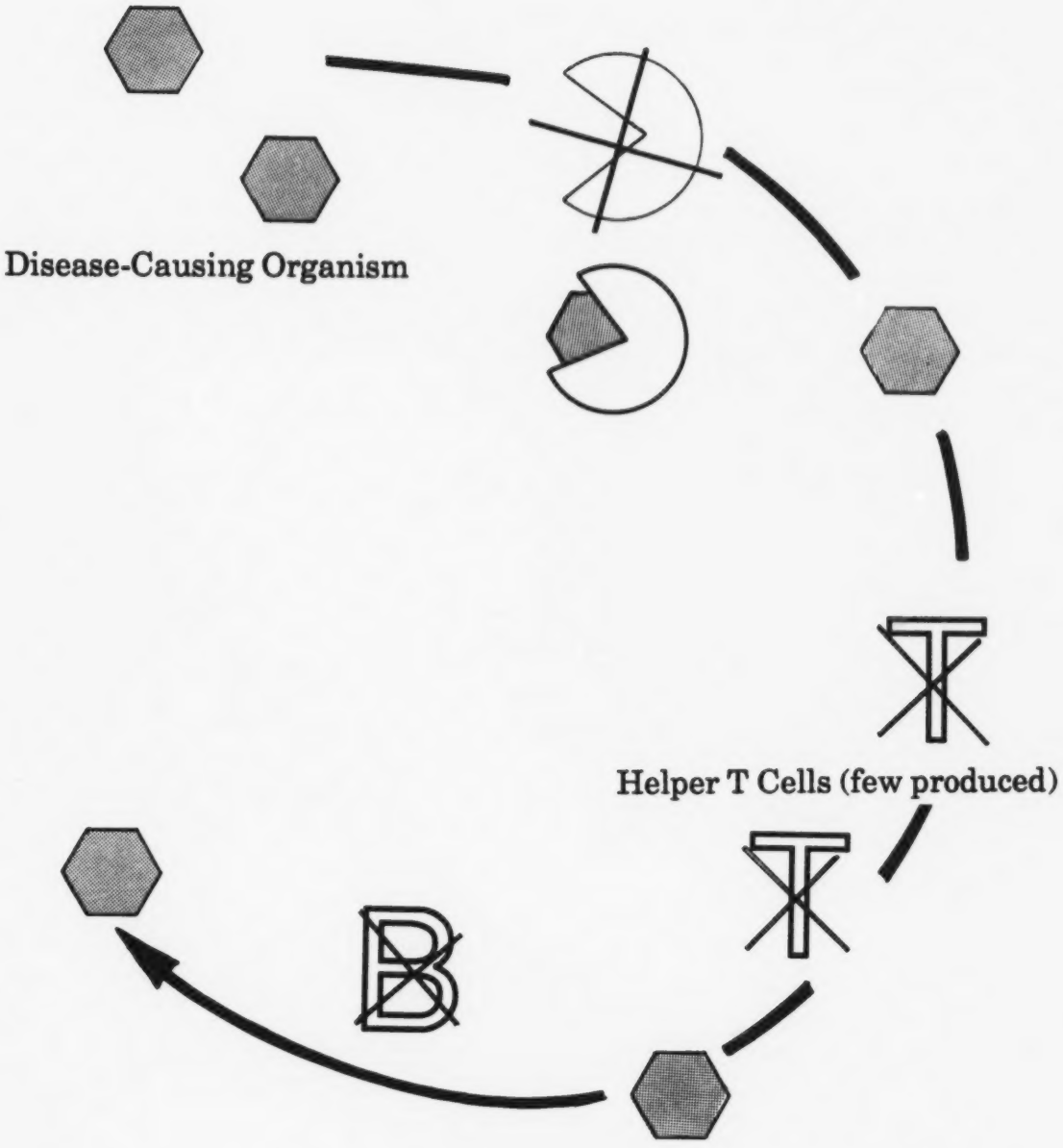
Effective Immune System Response in the Human Body



Overhead #1 Description

Overhead #1 shows how the human body fights disease-causing organisms. One way our immune system stops disease-causing organisms from making us sick is to engulf these disease-causing organisms by 'cell eaters'. Another way to stop disease-causing organisms is for B cells to produce antibodies against them. Before antibodies can be produced, helper T cells must stimulate many B cells to be produced. The antibodies, produced by the B cells, bind to the surface of the disease-causing organism which neutralizes it. Sometimes an organism, such as the chicken pox virus, enters our body and makes us sick. Some of our white blood cells (B cells) produce antibodies that kill the chicken pox virus. Any new chicken pox viruses that enter the body after that are stopped by the antibodies. Sometimes we receive a vaccination against a virus like measles. Our body produces antibodies due to the vaccination and stops other measle viruses from making us sick.

Ineffective Immune System Response in Person Living with AIDS



Overhead #2 Description

Let's suppose disease-causing organisms enter the body of a person with AIDS. When a person has AIDS, their helper T cells are destroyed. Therefore, the person's body does not have helper T cells to stimulate the production of B cells. Thus, very few antibodies are produced. The immune system no longer works well. The disease causing organisms make the person sick and sometimes cause death. The AIDS virus itself does not kill a person but destroys the immune system.

ACTIVITY 4

(Days 3 and 4)

Objective

To gain accurate information about AIDS

To gain compassion for people with AIDS

Materials

Newsweek, August 10, 1987 laminated photograph cards (5-10 cards per student) - kit

Worksheet #1

Videotape - *I Have AIDS: A Teenager's Story* 28 minutes

Question Box

Teaching Sequence

Tell students they will look at photographs of some people who have died from AIDS. Give a set of 5-10 photographs with a written description of each person with AIDS on separate cards as described under materials on page 2. Go over the following terms for understanding before students begin the activity.

- IV (intravenous) drug use
- hemophiliac
- sexual contact or intercourse
- blood transfusion
- transmission

Give each student a copy of Worksheet #1 and the laminated photograph cards of people who have died from AIDS. Have students look at the photographs alone. Then have students work in groups of two to discuss their photographs, which are different, and answer the questions from Worksheet #1.

Discuss the worksheet questions as an entire group. They should conclude that AIDS can affect anyone. Risky behavior by people is

what causes people to get the virus/disease. They should be able to tell how the virus was transmitted to some of the people. List the behavior or situations that put people at risk of getting AIDS. It would be a good idea to mention that there is no risk of getting AIDS at the doctor's office from an injection since all equipment is sterilized and disposable needles are used.

Behaviors or situations that put a person at risk for getting AIDS:

- sexual intercourse with an infected person - Many people who are infected with the virus do not know they have it. Some people who know they have the AIDS virus do not inform their sexual partners.
- IV drug use through needle sharing
- receiving transfusions of infected blood - All blood has been screened after 1985, but there remains a slight risk of AIDS transmission.
- being born to a mother with the HIV virus

This leads into the videotape *I Have AIDS: A Teenager's Story* about Ryan White. The videotape will give students good background information for subsequent activities. After the videotape, lead a discussion on the following key points.

- transmission of the AIDS virus
- reaction of different communities to Ryan White
- stress compassion for people living with AIDS

Have students write down any unanswered questions and place them in the Question Box.

NOTE: The day's lesson should end with this activity.

Photographs of People Who Have Died from AIDS

Look carefully at the photographs of people in the United States who have died from AIDS.

1. How old were the people in the photographs when they died? Write down 7 ages.

2. What ethnic groups are shown in the pictures (Caucasian, Hispanic, Black, Asian, Indian)?

3. Do both males and females get AIDS? What is your evidence?

4. Where did the people live who died from AIDS in the pictures? Write down 6 places.

5. What kind of work did the people who died from AIDS do? Write down 5 jobs.

6. How did the people who died from AIDS get the disease? Write down 3 ways.

7. What conclusions can you make about AIDS by looking at the pictures?

Photographs of People Who Have Died from AIDS

Look carefully at the photographs of people in the United States who have died from AIDS.

1. How old were the people in the photographs when they died? Write down 7 ages.

   Range of ages (can be any age).
2. What ethnic groups are shown in the pictures (Caucasian, Hispanic, Black, Asian, Indian)?

   Answers will vary. Composite of class should show all ethnic groups.
3. Do both males and females get AIDS? What is your evidence?

   Yes - photographs of both sexes. However, there are more men with AIDS than women in the U.S.
4. Where did the people live who died from AIDS in the pictures? Write down 6 places.

   Range of areas. Composite of class will show people with AIDS are found in all states.
5. What kind of work did the people who died from AIDS do? Write down 5 jobs.

   There will be a wide range of jobs. Composite of class will show people with AIDS do many jobs and come from all economic levels.
6. How did the people who died from AIDS get the disease? Write down 3 ways.

   Sexual intercourse, blood transfusion, IV drug use, or born with AIDS.
7. What conclusions can you make about AIDS by looking at the pictures?

   People of any age, ethnic group, sex, and economic level can get AIDS. They can live anywhere in the U.S.. Many people who get AIDS engage in high risk behaviors (sexual intercourse or IV drug use). However, some people contracted AIDS from a blood transfusion (slight risk after 1985) or receiving blood products (hemophiliacs).

ACTIVITY 5

(Day 4)

Objective

To gain compassion for people with AIDS

Materials

Question Box

Teaching Sequence

Begin the lesson by leading a discussion on any questions in the Question Box.

Q *What is life like for a person who has AIDS?*

Read the following which is based on the accounts of a 30 year old man after being diagnosed with AIDS. After diagnosis with AIDS,

I continued to try to work for a couple of months. I wanted very much to work. And finally I just physically could not do it any longer. I couldn't get out of bed until 10:00 in the morning. I was dead by early afternoon. I didn't have more than a few productive hours a day. I had an infection in my lungs that raised my temperature to 104 degrees several times a day followed by profuse sweating. Under these circumstances, it was almost impossible to work. But even in the periods where I could have done some work, I could be fired. So my lawyer had me stop working. I couldn't be fired if I was at home on sick pay.

I've had AIDS now for almost a year, and I assume that I will die from it. I have a very strong feeling that I will die in the fall of this year. That's just a feeling. I could be completely wrong. But that is my feeling about it.

So AIDS is not my problem, and by that I mean there's not much that the doctors can do for me. There's a virus in my body that is eating my tissue and my organs. And sometimes I wake up at night, and I can actually sense its presence, eating away. I have days when my calves and my thighs just fall forward on the leg, off the bone and off the muscle. It's because the tissue's being eaten.

The issues are such simple issues once you have AIDS. Monday morning, I got up and I couldn't walk for two hours. The pain in my bones was so great that I just couldn't be on my feet. And once you begin to deal with these symptoms on a daily basis, it all looks crazy that people want to sit around and discuss what we should do about AIDS. It's too late. These are arguments that we should have had a few years ago. There's no doubt about how AIDS is passed. There's no doubt in my mind about how it was passed to me. What we should be doing is educating people.

I'm going to stop here, but I want to close by just saying: I have AIDS, and AIDS is not my problem any longer. AIDS is your problem, and I hope you'll do something about it. Thank you for listening.

Ten days after this account was written, the man died.

Lead a discussion that helps the students reflect on the reading. Some question examples are:

- Q *What will you remember about this man's life?*
- Q *Why do you think other people should read or listen to this account?*
- Q *What did he mean when he said, "AIDS is your problem?"*
- Q *What can you do about the AIDS epidemic?*

Extension

You may want students to write down any symptoms of disease they hear as they listen to you read about this account.

Ask students if they think all people with AIDS have the same symptoms of disease. Students could then do some research on the different symptoms of people with AIDS.

NOTE: Continue the day's lesson by doing the next activity.

ACTIVITY 6

(Day 4)

Objective

To gain accurate information about AIDS and AIDS transmission

Materials

Worksheet #2

Question Box

Teaching Sequence

AIDS is hard to get. AIDS is not transmitted through casual contact. Have students individually complete the AIDS Transmission worksheet. Discuss the worksheet as a group. Make sure students have the accurate information.

A sample of questions is:

- **Q** *How is the AIDS virus transmitted?*
- **Q** *How is the AIDS virus not transmitted?*
- **Q** *How is transmission of AIDS different than transmission of the common cold? The flu? Strep throat?*

Bring closure to the discussion by having students make a general statement on how the AIDS virus is transmitted.

EXAMPLE: *The AIDS virus is transmitted through exchange of body fluids which are blood to blood contact and sexual intercourse.*

This would be a good place to close for instruction on day 4. Have students write down any questions they have about AIDS on a card and put them in the question box.

AIDS Transmission

Can AIDS be transmitted by the following?	Yes	No	Why?
1. swimming			
2. shaking hands			
3. sharing an eating or drinking utensil			
4. sharing clothes			
5. through the air			
6. working together			
7. telephones			
8. toilet seats			
9. holding hands			
10. exchanging blood with another person (blood brother ritual)			
11. combing another person's hair			
12. sleeping in the same room			
13. hot tubs			
14. coughing or sneezing			
15. sharing a hypodermic needle			
16. touching a door knob			
17. intimate sexual contact			
18. using the same pencil			
19. kissing - cheek/lips			
20. insect bites such as a mosquito			
21. donating blood for medical reasons			
22. sitting in the same chair			
23. being a baby of a mother with the AIDS virus			
24. drinking fountains			
25. getting ears pierced with sterile needle			
26. getting a tatoo			

Worksheet #2 Answer Key

AIDS Transmission

Can AIDS be transmitted by the following?	Yes	No	Why?
1. swimming		X	virus dies in water
2. shaking hands		X	not transmitted through casual contact
3. sharing an eating or drinking utensil		X	not transmitted through casual contact
4. sharing clothes		X	not transmitted through casual contact
5. through the air		X	not transmitted through air
6. working together		X	not transmitted through casual contact
7. telephones		X	not transmitted through casual contact
8. toilet seats		X	not transmitted through casual contact
9. holding hands		X	not transmitted through casual contact
10. exchanging blood with another person (blood brother ritual)	X		virus transmitted through blood to blood contact
11. combing another person's hair		X	not transmitted through casual contact
12. sleeping in the same room		X	not transmitted through casual contact
13. hot tubs		X	not transmitted through water
14. coughing or sneezing		X	not transmitted through air
15. sharing a hypodermic needle	X		unsterilized needles may have blood with virus
16. touching a door knob		X	not transmitted through casual contact
17. intimate sexual contact	X		semen or vaginal fluid can transmit virus
18. using the same pencil		X	not transmitted through casual contact
19. kissing - cheek/lips		X	not transmitted through casual contact
20. insect bites such as a mosquito		X	mosquito sucks blood (does not put blood into person)
21. donating blood for medical reasons		X	sterile needle used
22. sitting in the same chair		X	not transmitted through casual contact
23. being a baby of a mother with the AIDS virus	X		may have blood to blood exchange
24. drinking fountains		X	not transmitted through water or casual contact
25. getting ears pierced with sterile needle		X	no blood exchange from a sterile needle
26. getting a tatoo	X		possibly, if needle is not sterile (blood to blood contact)

ACTIVITY 7

(Day 5)

Objective

To gain accurate information about the distribution of AIDS in the U.S.

To learn how to process data from the information given

To learn about AIDS in your state

Materials

Question Box

Beans or colored chips from kit (about 1,000 for a class or 25-50 if done as a teacher demonstration)

Worksheet #3

U.S. map for students - Overhead #3

AIDS in the United States sheet for students

People With AIDS in Your State Sheet for students

Teaching Sequence

Begin the lesson by discussing questions in the Question Box.

This activity requires the students to use a U.S. map, AIDS in the United States Data Sheet and People With AIDS in Your State Sheet. Ask students to look at the data sheet to determine where people with AIDS live in the United States. Go over one example. Have students individually or in groups of two answer questions 1 through 8 on AIDS in the United States Worksheet. There may be a discrepancy between the number of AIDS cases reported by your state Health Department and the number of cases reported for your state by the U.S. Department of Health and Human Services for the same time period. This may be due to the states reporting their figures before the actual end of the month to the U.S. Department of Health and Human Services, Centers for Disease Control. Students will need an explanation on a discrepancy if you should find one. Before students answer question

9, you should go over doubling time. You can show them doubling time on the overhead using beans or chips.

Example

2 chips
↓
4 chips
↓
8 chips
↓
16 chips
↓
32 chips
↓
64 chips, etc.

If you want to have students practice for understanding on doubling time for AIDS in your state, you can give pairs of students beans or chips. Let each bean or chip represent 50 people. A model for Colorado is given in Worksheet #3 which can be adapted to any state.

Until 1989 the doubling time for AIDS cases was about every 10 months. In 1989 the doubling time slowed down. Currently the doubling time ranges from about 12 to 15 months. In the future, doubling time may slow even further. Students could be asked why the doubling time has slowed. This could lead to a discussion about how a change in human behavior can make a difference in the rate of transmission of a disease. For question #9, the doubling time is given as about every 12 months.

Lead a group discussion on the information in the Worksheet.

An important point to include is that people with AIDS are found worldwide.

Conclude the lesson for the day by having students summarize what they know about AIDS from the activity.

Students should write down any unanswered questions and place them in the Question Box.

Extension

Collect the statistics on AIDS cases in your states from your state health department for at least 5 years. Have students graph this data using a bar graph or line graph to show how the disease progressed in your state. Students can also collect monthly data for one year on AIDS in your state. Have students show this information on a graph.

People With AIDS in Your State
(Colorado)

November 30, 1989

Number of People with AIDS	1215
Number of Males with AIDS	1165
Number of Females with AIDS	50

Age Breakdown

0 - 9	7
10 - 19	8
20 - 29	246
30 - 39	579
40 - 49	246
Over 49	129

Geographic Distribution

Denver Metropolitan Area	1026
Southeast Colorado	35
South Central Colorado	76
Northeastern Colorado	43
Western Colorado	35

Method of Transmission

Sexual Contact	942
IV Drug User	68
Sexual and IV Drug User	120
Transfusion Recipient	33
Hemophiliac	29
Born to Parent Who Has AIDS	3
Undetermined Risk	20

AIDS in the United States

(November 30, 1989)

State	Total Cases	State	Total Cases
Alabama	644	Montana	38
Alaska	73	Nebraska	127
Arizona	938	Nevada	427
Arkansas	233	New Hampshire	127
California	22,735	New Jersey	7,847
Colorado	1,202	New Mexico	231
Connecticut	1,416	New York	25,957
Delaware	214	North Carolina	1,107
District of Columbia	1,930	North Dakota	18
Florida	9,569	Ohio	1,609
Georgia	2,944	Oklahoma	507
Hawaii	461	Oregon	676
Idaho	49	Pennsylvania	3,201
Illinois	3,382	Rhode Island	284
Indiana	656	South Carolina	691
Iowa	161	South Dakota	16
Kansas	295	Tennessee	749
Kentucky	314	Texas	7,663
Louisiana	1,538	Utah	231
Maine	154	Vermont	49
Maryland	2,060	Virginia	1,313
Massachusetts	2,443	Washington	1,516
Michigan	1,402	West Virginia	111
Minnesota	615	Wisconsin	413
Mississippi	356	Wyoming	28
Missouri	1,224		

Total number of AIDS cases in the United States - **111,944**

56

55

AIDS in the United States

Use the map of the United States, the AIDS in the United States sheet listing AIDS cases per state, and the people with AIDS in Your State sheet to answer these questions.

1. How many states have people with AIDS?

2. Which state has the highest number of people with AIDS?

3. Which area in the state you selected in question 2 would you predict to have the most people with AIDS? Why?

4. List the 5 states with the highest numbers of people with AIDS.

   Write these numbers for the states on your U.S. map.

5. How many people with AIDS are found in your state as of November 30, 1989? (Use the number listed in "AIDS in the United States" sheet.)

6. Which part of your state has the highest number of people with AIDS?

   Which part of your state has the lowest number of people with AIDS?

7. Where does your state rank in the total number of AIDS cases in relationship to the rest of the U.S.?
8. Which five states have the fewest number of people with AIDS?

   Write the numbers for the 5 states on your map.
9. By looking at the information on the number of people with AIDS, predict where the AIDS virus started in the United States.

10. About every 12 months the number of AIDS cases doubles in the United States. For example, Idaho had 49 people with AIDS on November 30, 1989. By November 30, 1990 you can predict that there will be about 98 people in Idaho with AIDS. By November 30, 1991, there will be about 196 people with AIDS in Idaho. On November 30, 1989, there were 1202 cases of AIDS in Colorado. Predict how many people will have AIDS in your state by November 30, 1990.

    Predict how many people will have AIDS in your state by:

    November 30, 1991

    November 30, 1992

    November 30, 1993
11. Based upon a doubling rate of about every 12 months, predict how many AIDS cases there will be in the United States:

    November 30, 1990

    November 30, 1991

    November 30, 1992
12. The only way to slow down the spread or transmission of the AIDS virus to other people is for people to be careful about what they do.

    Give an example of how you can be careful so you do not get AIDS.

AIDS in the United States

1. How many states have people with AIDS?

   All states

2. Which state has the highest number of people with AIDS?

   New York

3. Which area in the state you selected in question 2 would you predict to have the most people with AIDS? Why?

   New York City - Large number of people with different lifestyles.

4. List the 5 states with the highest numbers of people with AIDS.

   New York, California, Florida, New Jersey, Texas

   Write these numbers for the states on your map.

5. How may people with AIDS are found in your state as of November 30, 1989?

   Colorado - 1202

6. Which part of your state has the highest number of people with AIDS?

   Colorado - Denver metropolitan area

   Which part of your state has the lowest number of people with AIDS?

   Colorado - southeast, west and northeast about the same.

7. Where does your state rank in the total number of AIDS cases in relationship to the rest of the U.S.?

   Colorado ranks 17th in number.

8. Which five states have the fewest number of people with AIDS?

   North Dakota, South Dakota, Wyoming, Montana, Idaho

   Write the numbers for the 5 states on your map.

9. By looking at the information on the number of people with AIDS, predict where the AIDS virus started in the United States.

   On the east and west coasts (New York City, San Francisco, Los Angeles

10. About every 12 months the number of AIDS cases doubles in the United States. For example, Idaho had 49 people with AIDS on November 30, 1989. By November 30, 1990 you can predict that there will be about 98 people in Idaho with AIDS. By November 30, 1991, there will be about 196 people with AIDS in Idaho. On November 30, 1989, there were 1202 cases of AIDS in Colorado. Predict how many people will have AIDS in Colorado by November 30, 1990.

    2,404

    Predict how many people will have AIDS in your state by:

    November 30, 1990 - ***Colorado 4,808***

    November 30, 1991 - ***Colorado 9,616***

    November 30, 1992 - ***Colorado 19,232***

11. Based upon a doubling rate of about 12 months, predict how many AIDS cases there will be in the United States:

    November 30, 1990 - ***Colorado 223,888***

    November 30, 1991 - ***Colorado 447,776***

    November 30, 1992 - ***Colorado 895,552***

12. The only way to slow down the spread or transmission of the AIDS virus to other people is for people to be careful about what they do.

    Give an example of how you can be careful so you do not get AIDS.

    Do not engage in high risk behaviors. No sexual intercourse, no IV drug use.

ACTIVITY 8

(Days 6 and 7)

Objective

To apply information learned about AIDS to a situation

To show compassion for people with AIDS by writing about a situation

Materials

writing materials for students

Question Box

Teaching Sequence

Lead a discussion on questions from the Question Box.

Ask students to respond to the following situation which can be written on the board or overhead.

Situation

Suppose a student in our school has been diagnosed to have the AIDS virus. At this time, the person does not have AIDS, and is not sick.

Have the students respond to this situation by individually writing a paragraph that includes these questions:

- Q *How would you feel about this person?*
- Q *How would you treat this person?*
- Q *How are your feelings and the way you would treat the person supported by accurate information about AIDS?*

Have the students share their responses in the large group. Emphasize that compassion should be shown to people with AIDS. Blame the virus, not the person.

Ask students how their class could help the student diagnosed with the AIDS virus. Have students discuss this in groups of two. Each pair should share one or two of their ideas with the large group. Make a list of the responses on the board or overhead. Have the students write down any unanswered questions and place them in the Question Box.

ACTIVITY 9

Objective

To learn how to make a good decision by exploring alternatives and consequences

To apply decision-making to a situation where AIDS could be transmitted

Materials

Question Box

overhead, newsprint or chalkboard

overhead pens, magic markers

Worksheet #4

Teacher Background

Throughout their lives, students may be asked to engage in behaviors that are illegal, unsafe, and unhealthy. Generally, a situation will ensue with peers when no adult supervision is present. Therefore, the good of this lesson is to provide students with the skills to handle difficult situations and to give them classroom practice time on decision-making and peer resistance skills. Three main influences on adolescent health decisions are:

1. Social - want peer approval
2. Developmental - adolescents have a strong desire to appear mature and independent
3. Belief system - Adolescent beliefs about the harmfulness or desirability of sexual activity or drug use play a major role in their decisions.

Through decision-making situations, adolescents integrate useful misconceptions previously learned, identify factors which influence choices and develop a framework to assess the situation, and make safe, legal and healthy decisions. To assist students in understanding why they make decisions, they need practice with social skills. In the classroom, opportunities need to be provided for students to:

- practice ways to appropriately communicate personal needs,
- identify ways to deflect peer pressure, and
- act on personal beliefs and standards to protect oneself.

Teaching Sequence

Begin the day by discussing any questions from the Question Box.

The first part of this lesson will help students in the decision-making process which will assist them in making better decisions where AIDS is an issue.

Begin the lesson by asking students to give you the steps they would use to make a decision. Write down their responses. Emphasize that these steps can be applied to personal health and safety.

Next, share the steps of a model for decision making. These steps assist people in identifying and considering the options available to make a decision.

Decision-Making Steps

- Identify the problem or situation
- Get necessary information.
- Identify alternative actions which includes working at gains and risks.
- Identify factors that would influence your decisions such as friends, family, media, community, and church.
- Evaluate your alternative actions based upon five critera which are:
  - *Is it safe?*
  - *Is it legal?*
  - *Is it healthy?*
  - *Is it acceptable to family?*
  - *Is it acceptable to friends?*
- Review – did the solution work? Note that in a hypothetical classroom situation, students will not be able to do this step.

Divide the students into groups of three or four to work on Situation A. Go over the situation and the task before the groups begin. Situation A is a chance for students to practice the decision-making process.

Situation A

> *A group of 6th graders are going over to Jamie's house after school. Jamie invites you to come. However, you know that Jamie's parents are not home since they both work. Your parents have a guideline that you are not to go to a friend's house unless an adult is present. What should you do?*

Have students complete Worksheet #4 in their small groups.

As a class, have each group share an answer from the worksheet. Each group should share their best alternative and their reason why. Write down these responses so everyone can see them.

Through discussion, help the class determine which alternatives are the best.

This leads into Situation B or C about the possibility of contracting AIDS. Have students work in the same groups to complete Worksheet #4. Go over the situation and task before students begin to work. Select situation B, C or both for students to gain practice using the decision-making model. You may choose to write a situation of your own that is more appropriate for your group of students.

Situation B

> *A classmate finds a used hyperdermic syringe in the park. After school, you are walking home with the classmate who found the syringe and two friends. Someone says 'Let's each tatoo our school emblem on one foot.' What should you do?*

Situation C

> *A college student that you know is considering a sexual relationship with another college student. What possible consequences should this person consider?*

In small groups, complete Worksheet #4.

After groups have completed the worksheet, discuss it as a class. Have different groups respond to different questions. These are the consequences or risks that need to be addressed in the class discussion. both situations have a risk for contracting the AIDS virus.

- Infection with the AIDS virus — Situation B or C
- Other STD's (i.e., Herpes, Syphilis) — Situation C
- Pregnancy — Situation C
- Emotional concerns — Situation B or C
- Financial concerns — Situation B or C
- Finishing school — Situation B or C

Make sure students understand that AIDS can be transmitted by people who don't know they have it or are not willing to say they do. A person may have been involved in high-risk behavior at a previous time and changed his/her behavior but still carries the AIDS virus from the high-risk time period.

Another key issue to raise is that a person's actions affect other people. An important point to stress is that a person does not have to make a decision immediately, but should take time to think about it. Once a decision is made, it can always be reversed.

Making The Best Decision

1. Identify the problem or situation.

_____

_____

2. Get necessary information.

_____

_____

3. Identify two or three actions including gains and risks.

Alternative #1

Action _____

_____

_____

_____

GAINS	RISKS

Alternative #2

Action _____

_____

_____

_____

GAINS	RISKS

Alternative #3

Action _____

_____

_____

_____

GAINS	RISKS

4. Identify factors that would influence your decision (or your friend's decision) such as friends, family, media, community, or church.

_____

_____

5. Evaluate the alternative actions based upon the five criteria

   - *Is it safe?*
   - *Is it legal?*
   - *Is it healthy?*
   - *Is it acceptable to family?*
   - *Is it acceptable to friends?*

	CRITERIA					
ALTERNATIVE ACTIONS (from #3)	**Safe**	**Legal**	**Healthy**	**Family**	**Friends**	**TOTAL**
1.						
2.						
3.						

Rate each alterative action with a 1 for yes and a 0 for no. Add the total score for each alternative to help you evaluate your alternatives.

6. Develop a plan for carrying out your best alternative action (from #5).

_____

_____

_____

_____

CLOSURE

Go back to the original list of what students thought they knew about AIDS and what they wanted to know. Go over the list and cross off any ideas that are not accurate. Answer any questions that have not been answered.

As a culminating activity, ask students to write a paragraph on what they know about AIDS, how they feel about people with AIDS and what behaviors they will exhibit to prevent the AIDS virus from entering their bodies.

A cognitive test which assesses student knowledge of some of the key facts about AIDS is provided on the following pages. The test could be used as an evaluation after the course (post-test). Because of the introductory activity, however, it is not recommended that the test be used as a pre-test.

AIDS Test

Write true or false in the blank preceding the question.

_____ 1. Organisms that cause diseases include bacteria, viruses, parasites, and fungi.

_____ 2. A virus causes AIDS.

_____ 3. Red blood cells are often infected by the AIDS virus.

_____ 4. The immune system works well when a person has AIDS.

_____ 5. The AIDS virus can be transmitted from one person to another by shaking hands.

_____ 6. The AIDS virus can be transmitted from mother to child during pregnancy.

_____ 7. A healthy looking person carrying the AIDS virus cannot transmit the virus to another person.

_____ 8. There is no cure for AIDS.

_____ 9. The AIDS virus generally affects new babies and people over 70 years old.

_____ 10. Sharing intravenous (IV) needles is a high risk behavior for transmitting the AIDS virus.

_____ 11. People with the AIDS virus should not attend school since the virus is easy to transmit.

_____ 12. People living with AIDS are found only in a few states in the United States.

_____ 13. Sexual intercourse is one way of transmitting the AIDS virus.

_____ 14. Epidemics such as AIDS can be slowed down or stopped.

_____ 15. Mosquitoes transmit the AIDS virus to people.

AIDS Test

Write true or false in the blank preceding the question.

True 1. Organisms that cause diseases include bacteria, viruses, parasites, and fungi.

True 2. A virus causes AIDS.

False 3. Red blood cells are often infected by the AIDS virus.

False 4. The immune system works well when a person has AIDS.

False 5. The AIDS virus can be transmitted from one person to another by shaking hands.

True 6. The AIDS virus can be transmitted from mother to child during pregnancy.

False 7. A healthy looking person carrying the AIDS virus cannot transmit the virus to another person.

True 8. There is no cure for AIDS.

False 9. The AIDS virus generally affects new babies and people over 70 years old.

True 10. Sharing intravenous (IV) needles is a high risk behavior for transmitting the AIDS virus.

False 11. People with the AIDS virus should not attend school since the virus is easy to transmit.

False 12. People living with AIDS are found only in a few states in the United States.

True 13. Sexual intercourse is one way of transmitting the AIDS virus.

True 14. Epidemics such as AIDS can be slowed down or stopped.

False 15. Mosquitoes transmit the AIDS virus to people.

Published By:

SOPRIS WEST, INC.
1140 Boston Ave.
Longmont, Colorado 80501

BEST COPY AVAILABLE